

## Class 10, Lumbar spine II

1. Lumbar disc disorder with **radiculopathy**
  - a. Disc is compressing nerve root
  - b. Onset: sudden, stiff back, patient has difficulty moving in the morning, or sustain any flexion position of the spine
  - c. **Pain in the leg, buttocks (paresthesia, numbness, pain, burning, electrical, pins and needles)**
  - d. Inspection – muscle spasm with flattened lumbar curve, lateral shift of the spine away from the side of pain. Sits on unaffected side buttocks. Flexion of the knees. Paravertebral muscle spasm.
  - e. AROM: Flexion increase symptoms, sitting increases symptoms, standing decreases symptoms
  - f. RIM: no pain
  - g. Special tests: SLR test +, and Slump +
  - h. X-ray, CT, MRI
2. Lumbar facet joint pathology (irritation, inflammation) no radiculopathy
  - a. Older than 50 years of age
  - b. Patient symptoms have been present for 2 to 3 month, History of steady increase in symptoms
  - c. Nagging ache in the central lumbar region
  - d. Symptoms are increased by activities that require extension, lateral flexion and rotation. Symptoms increase during walking. Better in sitting and slumping position. Patient feels relief lying flat on the back with knees bent.
  - e. Inspection – mild spasm
  - f. AROM: limited extension, flexion full range. Some limitation on lateral flexion and rotation.
  - g. PROM: overpressure on extension can increase symptoms and can give bone to bone feel
  - h. RIM: normal
  - i. Palpation: palpation of facet joints produces pain
  - j. Special tests: negative

3. Facet joint pathology with radiculopathy
  - a. Central aching pain in lumbar region and pain in the leg or numbness, pins and needles.
  - b. Symptoms are eased in sitting slumped position but produces stiffness after prolonged time. Walking increases leg symptoms
  - c. Inspection: increased lumbar lordosis
  - d. AROM: limited extension, stiffness at the end of flexion, with reproduction of back and leg pain .
  - e. PROM: overpressure reproduces symptoms
  - f. RIM: normal
  - g. Palpation: pain over facet joints
  - h. Special tests: can be positive SLRT
4. Sacroiliac joint strain
  - a. Flexion and extension with rotation can cause too much stress on SIJ ligaments.
  - b. Dull aching pain, at the junction of spine and pelvis. Pain can radiate as far as knee
  - c. Heaviness in both legs
  - d. Patient has difficulty getting out deep seated sofas.
  - e. Inspection: muscle spasm and flattening on lumbar curve
  - f. AROM: pain on flexion, particularly rising from seated position. Limitation on extension.
  - g. PROM: pain on overpressure during E/F/R
  - h. RIM: normal
  - i. Palpation: pain medial to PSIS
  - j. Special – compression and tests positive. SLR pain in the lower back after 70 degrees, bilateral SLRT pain before 70 degrees
5. Combined disc and facet joint disorder
  - a. All activities cause pain, lying down can make it better
6. Spinal stenosis
  - a. Narrowing of the spinal canal, can be at any level (cervical, lumbar)
  - b. Can also narrow neural foramina
  - c. Symptoms in the back at the beginning are very mild. Paresthesia, anesthesia, numbness, pain, heaviness in lower legs.
  - d. Symptoms occur after walking or standing certain time

- e. Patient likes sitting with slumping forward or standing leaning forward
- f. AROM: Extension increases pain, Side flexion and rotation does not change the symptoms
- g. X-ray
- h. Cauda equina syndrome – emergency referral